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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,721	12/31/2003	Lyonel Renaud	42P18014	9222
45209	7590	12/11/2008	EXAMINER	
INTEL/BSTZ			SUN, SCOTT C	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP			ART UNIT	
1279 OAKMEAD PARKWAY			PAPER NUMBER	
SUNNYVALE, CA 94085-4040			2182	
			MAIL DATE	DELIVERY MODE
			12/11/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/749,721

Applicant(s)

RENAUD ET AL.

Examiner

SCOTT SUN

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) 1-12 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 13-28 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-85/86)
Paper No(s)/Mail Date 5/9/05, 6/6/05, 5/21/08
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 13-28 in the reply filed on 10/2/2008 is acknowledged. Claims 1-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (hereinafter APA) in view of Cory et al (US Patent #7,295,639, hereinafter Cory) and further in view of Collier et al (Pub #2002/0112099, hereinafter Collier).

4. Regarding claim 19, APA discloses a system (system discussed in background) comprising: a processor (paragraph 2); a main memory (paragraph 2); and an integrated circuit (IC) device (one or more IC devices, paragraph 2) which is communicatively coupled to the processor and the main memory and provides the processor with I/O access (paragraph 2), the IC device having link interface circuitry that supports a serial, point to point link (point to point PCI express, paragraph 2).

APA does not disclose explicitly elastic buffer being used. However, Cory discloses an elastic buffer having an input to receive a plurality of symbol sequences that were transmitted by another device over the serial point to point link, the elastic buffer to provide a plurality of buffered symbol sequences (column 3, lines 6-10). Teachings of APA and Cory are from the same field of data transmission.

Therefore, it would have been obvious at the time of invention for a person of ordinary skill in the art to combine teachings of Cory and APA by using elastic buffers in APA for the benefit of avoiding overflow and underflow conditions (column 3, lines 14-16).

APA and Cory combined do not disclose explicitly deskew buffers. However, Collier discloses deskew circuitry (deskew controller and buffers shown in figure 1, paragraph 17)) having an input coupled to an output of the elastic buffer, the deskew circuitry to forward the plurality of buffered symbol sequences with reduced skew in response to an enable control signal being asserted (deskew by definition reduces or eliminates skew), the deskew logic includes a plurality of deskew buffers (descrew buffers 261-272 shown in figure 1, paragraph 17), write pointer logic to load the plurality of buffered symbol sequences into the plurality of deskew buffers (arrow into deskew buffers, figure 1), read pointer logic to provide a plurality of read pointers to unload the plurality of buffered symbol sequences from the plurality of deskew buffers (arrow out from deskew buffers, figure 1; examiner notes that read and write pointers are ordinarily used to address the location of data to be written or read, this is also taught for example, by Cory in column 3, lines 16-20), and control logic having an output coupled

to the read pointer logic, the control logic to, in response to the first instance of a first, predetermined non-data symbol appearing at an output of one of the plurality of deskew buffers since the enable control signal was asserted (control from deskew controller 280, paragraph 17), a) stall the read pointer for said deskew buffer (stops output from deskew buffer, paragraph , and b) generate an instance of a second, different predetermined non-data symbol (recognizable training sequence) at an output of the deskew circuitry through which the buffered symbol sequence for said deskew buffer is forwarded (paragraph 17).

5. Regarding claim 20, APA, Cory, and Collier combined disclose the system of claim 19 Collier further discloses wherein the read pointer is to be stalled at an entry that contains an instance of the first non-data symbol (stop output of deskew buffers in accordance with recovered clock signal, paragraph 17).

6. Regarding claims 21 and 22, APA, Cory and Collier combined disclose the system of claim 19 and 20 Collier further discloses wherein the control logic is to a) release the read pointer and b) stop generating instances of the second predetermined non-data symbol, if an instance of the first predetermined non-data symbol has appeared at an output of every one of the plurality of deskew buffers (paragraph 18).

7. Regarding claim 23, APA, Cory and Collier combined disclose the system of claim 22 Collier further discloses wherein the control logic is to, in response to an indication that a predetermined non-data symbol sequence is about to be loaded into one of the plurality of deskew buffers, stall the read pointer for another one of the plurality of deskew buffers and generate an instance of the second non-data symbol at

an output of the deskew logic through which the buffered symbol sequence for said another deskew buffer is forwarded (detection of the recovered clock, paragraph 17, 18).

8. Regarding claim 24, APA, Cory and Collier combined disclose the system of claim 23 Collier further discloses wherein the read pointer is to be stalled for said another deskew buffer an entry that contains a data symbol (reading from the deskew buffers are stopped, note that deskew buffers ordinarily store data from the data inputs 201-212).

9. Regarding claim 25, APA, Cory and Collier combined disclose the system of claim 19 and Collier further discloses wherein the first non-data symbol is a PCI Express COM and the second non-data symbol is a PCI Express SKP (examiner notes that Collier teaches using a specific recognizable training sequence, paragraph 17, therefore using PCI Express protocols would have been an obvious design choice).

10. Regarding claim 26, APA, Cory and Collier combined disclose the system of claim 19 and APA further discloses a graphics element (graphics element, paragraph 2); and wherein the IC device is a memory controller hub (MCH) that communicatively couples the processor to the main memory and the graphics element (paragraph 2).

11. Regarding claim 27, APA, Cory and Collier combined disclose the system of claim 19 and APA further discloses wherein the IC device is an I/O controller hub that communicatively couples the processor to peripheral devices (paragraph 2).

12. Regarding claim 28, APA, Cory and Collier combined disclose the system of claim 23 and Collier further discloses wherein the predetermined non-data symbol

sequence includes an instance of the first non-data symbol followed by an instance of the second non-data symbol, the instance of the first symbol but not the second symbol being loaded into said one of the plurality of deskew buffers (paragraph 17).

13. Regarding claims 13-18, examiner notes that these claims are substantially similar to claims 19-25 above. The same grounds of rejection are applied.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SCOTT SUN whose telephone number is (571)272-2675. The examiner can normally be reached on Mon-Thu, 10:00am-8pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SS

/Ilwoo Park/
Primary Examiner, Art Unit 2182
December 8, 2008